

# COTTONMOUTH



## TAXONOMY

**Order:** Squamata

**Family:** Viperidae

**Genus/species:** *Agkistrodon piscivorus*

## DESCRIPTION:

Cottonmouths reach 30 to 48 inches (76 to 122 cm) in length, occasionally up to 74 inches (1.8 m). The back is dark olive or black, the belly is paler. On young animals the back is marked by bands with dark borders and paler centers. This pattern is usually lost in older individuals. The snout is always pale, and there is usually a dark vertical line by each nostril. The banding pattern in the young may be striking.

Cottonmouths are primarily active at night, but they bask in the sun during the day. Because they spend much of their time in water, and water draws away heat more quickly than air, they must somehow maintain a high body temperature, particularly for their digestive metabolism. This is accomplished partly by basking.

Cottonmouths have varying temperaments. They are usually not aggressive and will not attack unless agitated. One of their unique behaviors is their ability to "stand their ground." When thoroughly aroused, a cottonmouth coils its body and threatens the intruder with its mouth wide open and its fangs exposed, showing the white lining of its mouth (thus its common name, the cottonmouth).

The cottonmouth is a pit viper. It possesses a pair of heat-sensing pits between their eyes and nostrils. The pit consists of two cavities, an outer and an inner, which are separated by a membrane. They are able to detect temperature differences of as little as 1.8° F (1° C). higher or lower than that of the background. They allow the snakes to strike very accurately at the source of heat--often a bird or mammal that is potential prey. The sensory apparatus is most efficient at night when prey are much warmer than the surrounding air.

## DISTRIBUTION AND HABITAT:

Cottonmouths reside mainly in the southeastern United States. This includes very southern Virginia to Florida and east to eastern Texas. There are three subspecies: the eastern, Florida, and western cottonmouths.

Cottonmouths are semi-aquatic and can be found near water and fields. They inhabit brackish waters and are commonly found in swamps, streams, marshes, and drainage ditches in the southern lowlands of the United States. They also live at the edges of lakes, ponds, and slow-moving streams and waters. They sun themselves on the branches, logs, and stones at the edge of the water.

## DIET IN THE WILD:

Cottonmouths eat both warm and cold-blooded prey, including other water snakes. Their diet includes fish, frogs, salamander, lizards, small turtles, baby alligators, birds, small mammals, and other snakes. Prey such as frogs, fish, and other snakes are held in the jaws for a few moments after capture to allow them to succumb to the venom. Mammals (which are likely to bite back) are struck and then instantly released. If the victim flees before the venom takes effect, the cottonmouth tracks it by scent. It then examines the carcass by touching it with its tongue to make sure that the prey is dead. It swallows the prey headfirst. Unlike non-venomous reptiles, the cottonmouth takes its time when feeding, perhaps because its prey is dead.

Newborn cottonmouths have a unique predatory technique. They flick their brightly colored tail tips, which look like worms, as bait, enticing small frogs or minnows within striking range. The copperhead is also known to do this.

## ZOO DIET:

The cottonmouth is fed mice, rats, and chicks.

## REPRODUCTION:

The cottonmouth is oviparous (the eggs develop within the maternal body without any additional nourishment from the parent and hatch within the parent or immediately after laying). Breeding takes place during the spring. It begins with the male nudging the female's back and sides. This continues for as long as several hours, until she exposes her tail and opens her cloaca for copulation. Ovulation takes place only in alternate years. The gestation period usually lasts from three to four months. The female produces a litter of up to 12 living young. Each young is brightly patterned with a yellow tail and is relatively large, about eight to ten inches long (20 to 25 cm) and .75 inches (2 cm) in diameter.

## LIFE SPAN:

Unknown.

## STATUS:

There is no particular concern about the conservation of the cottonmouth. Because they are such large and venomous snakes, they have only a couple of natural enemies. These include king snakes, great blue herons, and largemouth bass. Humans are wary of these venomous snakes and try to kill them, but non-venomous water snakes are often mistaken for cottonmouths. As a result, more non-venomous water snakes are killed every year than cottonmouths.

These snakes can cause very severe, and even sometimes fatal, damage when they bite. But this is very uncommon because the cottonmouths are normally not very aggressive creatures. The number of deaths caused by snakebites (all species) every year in the United States is negligible.

## FUN FACTS:

The venom of the cottonmouth is produced by glands that are located near the point where the upper and lower jaws join. As the snake strikes and inserts its fangs in the prey, the muscles surrounding the poison sacs contract and squeeze the venom along ducts that lead to the base of the fangs. The venom then travels through the hollow fangs and out a small opening at the tip of the fangs into the prey. Total venom replacement actually requires no more than three weeks, even after being fully depleted. Under natural conditions the amount of toxin is never significantly diminished.

The venom of the cottonmouth is hemotoxic. This means that the venom breaks down and destroys blood cells and other tissues and reduces the ability of blood to coagulate or clot. Therefore, this results in a hemorrhage throughout any portion of the circulatory system that is penetrated by poison.

This is in contrast to coral snakes, for example, which have a neurotoxic venom that attacks the central nervous system of the prey.

These snakes are also called water moccasins.